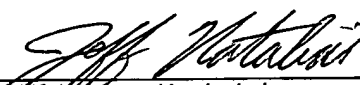


Form PTO-1449 <b>INFORMATION DISCLOSURE CITATION</b> IN AN APPLICATION (Use several sheets if necessary)		Docket Number (Optional) POM-139.02		Application Number 10/658,583		
Applicant Champion et al.		Filing Date September 9, 2003		Group Art Unit 2858		
<b>U.S. PATENT DOCUMENTS</b>						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
JM	AA	6,137,262	10-2000	Macke, et al.	324	71.1
JM	AB	6,608,489	08-2003	Yankielun, et al.	324	642
JM	AC	6,307,380	10-2001	Hirai, et al.	324	533
	AD					
	AE					
	AF					
	AG					
	AH					
	AI					
	AJ					
	AK					
<b>FOREIGN PATENT DOCUMENTS</b>						
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES NO
	AL					
	AM					
	AN					
	AO					
	AP					
<b>OTHER DOCUMENTS</b> <span style="float: right;">(Including Author, Title, Date, Pertinent Pages Etc.)</span>						
	AQ					
	AR					
	AS					
EXAMINER				DATE CONSIDERED 12/17/04		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.						

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE



PTO/SB/08a (08-03)  
Approved for use through 07/31/2008. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/658,583
				Filing Date	September 9, 2003
				First Named Inventor	Champion, James Robert
				Art Unit	2858
				Examiner Name	NYA
				Attorney Docket Number	FOM-139.02
Sheet	1	of	1		

U.S. PATENT DOCUMENTS					
Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
<i>JM</i>	BA	US-5,841,028A	11-24-1998	Belcher, Timothy Lloyd, et al.	
<i>JM</i>	BB	US- 6,229,476B1	05-08-2001	Thoren, Werner, et al.	
<i>JM</i>	BC	US- 3,208,281A	09-28-1985	Kalmus, Henry P., et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
<i>JM</i>	AA	FR 2 763 682 A	11-27-1998	Comm Composants Soc Ind		

Examiner Signature	<i>Jeff Matelini</i>	Date Considered	12/17/04
-----------------------	----------------------	--------------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Form PTO-1449

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**  
(Use several sheets if necessary)
Docket Number (Optional)  
FOM-139.02Application Number  
Not Yet AssignedApplicant  
Champion et al.Filing Date  
HerewithGroup Art Unit  
Not Yet Assigned**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER		DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
JM	A1	5,609,059	03/11/97	McEwan	73	290	12/19/94
JM	A2	6,216,540 B1	04/17/01	Nelson et al.	73	633	12/10/96
JM	A3	6,229,476 B1	05/08/01	Lütke et al.	342	124	11/22/99
JM	A4	6,250,601 B1	06/26/01	Kolar et al.	251	129.04	07/17/98
JM	A5	6,373,261 B1	04/16/02	Kielb et al.	324	644	10/12/99
JM	A6	6,377,201 B1	04/23/02	Chu	342	22	06/03/98
JM	A7	6,477,474 B2	11/05/02	Diede	702	57	01/21/99

**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

**OTHER DOCUMENTS**

(Including Author, Title, Date, Pertinent Pages Etc.)

JM	C1	"Section 3: Ground Penetrating Radar" 4-GPR, <a href="http://sfu.ca/earth-sciences/courses/307/4-gpr.htm">http://sfu.ca/earth-sciences/courses/307/4-gpr.htm</a> , printed March 24, 2003, pp. 1-47					
JM	C2	"Project Minitest Final Report" Work completed under Contract AA 501031 (DG INFSO) and JRC FPV Institutional, Issued September 10, 2001, 25 pages					
JM	C3	Case Study, "Fluid Level Sensing by Time Domain Reflectometry", Arthur D. Little, Cambridge Consultants, 1 pg.					

EXAMINER

DATE CONSIDERED

*Jeff Katalinai**12/17/04*

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE